REMARKS

Claims 1-3 and 5–17 are pending in the application. Claims 1 and 8 have been amended to include subject matter related to canceled Claim 4. New claims 11-17 have been added. No new matter has been added.

Double Patenting Rejections

The Office Action dated October 11, 2006 rejected Claims 1-10 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over Claims 41-45 of U.S. Patent No. 6,958,053 to Reilly.

Applicants' invention of independent Claims 1 and 8 are directed to a method of preparing an injection procedure and have been amended to include "advancing the piston to prime the syringe and a tube connected to the syringe."

Reilly teaches a method limited to advancing the plunger forward to expel air from the syringe in preparation for loading the syringe with fluid, with no additional teaching or suggestion of automatically retracting the plunger and advancing the piston to prime the syringe or connecting tube. In fact, Reilly teaches "substantially stopping forward advancement of the drive member upon engagement of the drive member with the plunger to prevent expulsion of fluid from the syringe," and thus teaches away from the present invention. Reconsideration is requested.

Rejections under 35 USC 102(e)

Claims 1-10 stand rejected under 35 USC 102(e) as being anticipated by Reilly.

The Office Action alleges that "Reilly discloses the claimed invention. See col., 9, line 19 through col. 10, line 9."

Applicants' invention of Claims 1 and 8 are directed to a method of preparing for an injection procedure including "advancing the piston to prime the syringe and a tube connected to the syringe."

The novel aspects of Applicants' invention includes that:

[t]he "auto prime" feature allows an injector to automatically prime the fluid path (i.e., syringe and connecting tubing) before an injection procedure. Preferably, the volume of fluid contained within a connector tubing used with a syringe is pre-programmed into the injector. For example, a 60' low pressure connecting tubing ("LPCT") provided by Medrad, Inc., the Assignee of the present application, for use with its disposable syringes typically holds approximately 2.78 ml of fluid. Alternately, the operator may manually program the fluid volume contained within the connector tube into the injector.

As will become apparent, the auto prime feature may be functionally dependent, in certain respects, on the auto fill feature described above. When a syringe is filled with fluid (i.e., by means of the auto fill feature), the injector automatically compensates for the connector tube by adding its corresponding fluid volume to the fluid volume desired by the operator to be aspirated into the syringe for an injection operation. For example, if the operator desires to fill the syringe with 150ml of fluid for an injection procedure, the auto fill feature will compensate for the connector tube fluid volume by automatically adding 2.78 ml of fluid (e.g., for a 60' LPCT), for a total volume of 152.78 ml aspirated into the syringe. After the syringe is filed with fluid, the auto prime feature would then cause the injector piston to advance the syringe plunger to the extent necessary to expel air from the syringe and connector tube system, preferably without prompting by the operator. Once the auto prime function is conducted, fluid should be present at the patient end of the connector tube (i.e., the end that is connected to the catheter).

As can be appreciated, the auto prime feature may save operator time and reduce the amount of wasted fluid. By automatically compensating for the fluid contained within the connector tube, the operator does not have to vigilantly watch the progression of the fluid from the syringe through the connecting tube in order to stop the advancement of the piston before a significant amount of fluid is discharged from the end of the connector tubing. Also, because some operators of conventional injectors advance the piston quickly to lessen the time required to prime the syringe and tubing system, often a significant amount of fluid will be expelled from the end of the connector tubing before the operator stops the piston's advancement. If a sufficient amount of contrast is expelled, the syringe may have to be re-filled (and the syringe and tubing system subsequently re-primed) to insure that it contains a sufficient amount of fluid for the required injection procedure.

While the auto prime feature is preferably intended for use with empty syringes that have been filled with fluid by an aspiration procedure on the injector (i.e., non-prefilled and non-preloaded syringes), the auto prime feature could also be used with prefilled and preloaded syringes. (Page 59, Para 2 to page 59, para 2).

Reilly discloses that:

> During loading of syringe 100 onto injector 200, an operator inserts the rear portion of syringe 100 within opening 232 in face plate 240 so that, for example, one or more guide or stop members 140 are aligned with corresponding slot(s) 260 formed in face plate 240. Retainer 230 may include a sensor bank 264 (seated, for example, in seating area 266 formed in face plate 240) including a loading sensor or sensors 270 to sense the presence of syringe 100 and begin rotation of retaining member 250 to draw syringe 100 rearward with the opening in face plate 240 and create a secure engagement between syringe 100 and injector 200. Many types of sensors as known in the art can be used as loading sensor(s) 270. For example, loading sensor 270 can include a switch mechanism that is triggered by contact with stop member 240. Alternatively, a manual switch (not shown) located on injector 200 or remote therefrom can be used to begin rotation of retaining member 250 once syringe 100 is in position. (Col. 9, lines 19-35).

Thus, Reilly does not disclose any "advancing the piston to prime the syringe and a tube connected to the syringe," and thus Applicants' invention is not anticipated by Reilly.

Claims 2-3, 5-7 and 9-10 depend from Claims 1 and 8, respectively, which as discussed herein is believed to be allowable. Thus, Claims 2-3, 5-7 and 9-10 are also believed to be allowable. Accordingly, reconsideration of Claims 1-10 is respectfully requested.

New Claims

Regarding new Claims 11-17, independent Claim 11 is directed to a method of preparing for an injection procedure and include subject matter from Claim 1 and is supported by the application as originally filed, including at page 59, para 2 to page 60, para 2, and is believed to be allowable. Claims 15-17 are supported by the Application as originally filed, including page 59, para.1. Claim 13 and 14 are supported by the Applications as originally filed, including page 59, para 2 and 3. Claims 12-17 depend from one of Claims 1, 8 and 11 and are also believed to be allowable.

In view of the above amendments and remarks, Applicants respectfully requests that the Examiner withdraw the rejections of the claims, indicate the allowability of the claims and arrange for an official Notice of Allowance to be issued in due course.

Respectfully submitted,

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